UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/526,493	03/30/2006	Ibrahim H. Ibrahim	22409-00360	7351

30678 7590 10/26/2009

CONNOLLY BOVE LODGE & HUTZ LLP
1875 EYE STREET, N.W.
SUITE 1100
WASHINGTON, DC 20006

EXAMINER	
DIETRICH, JOSEPH M	

ART UNIT	PAPER NUMBER
3762	

MAIL DATE	DELIVERY MODE
10/26/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/526,493	IBRAHIM, IBRAHIM H.	
	Examiner	Art Unit	
	Joseph M. Dietrich	3762	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 September 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-33 and 58* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-33 and 58* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *04 March 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on September 28, 2009 has been entered.

Response to Arguments

2. Applicant's arguments filed September 28, 2009 with respect to claims 1 - 33 have been fully considered but they are not persuasive.

Applicant argues that Kung discloses a proximity detector that determines a distance between a primary coil and a secondary coil by determining the resonant frequency of the primary coil, and does not teach measuring the strength of a magnetic field generated at least in part by an external transceiver. However, both the Jeutter and Chen references are relied upon to teach measuring the strength of a magnetic field proximal to the external transceiver and determining a position of the external transceiver relative to the implanted transceiver from the measured magnetic field strength. The Kung reference is merely relied upon to teach that it is known that an external transceiver can generate a magnetic field that can be used by an implanted device to determine the relative position. Furthermore, in column 15, lines 50 – 56, the

Kung references teaches that secondary coil (the implanted device) is capable of determining if the strength of the magnetic signal of the external device exceeds a threshold.

In response to applicant's argument that the proposed combinations of Jeutter and Kung and Chen and Kung would render both Jeutter and Chen unsatisfactory for its intended use, the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981).

3. Applicant's arguments with respect to claim 58 have been considered but are moot in view of the new ground(s) of rejection, necessitated by amendment.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claim 58 is rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Chen et al. (USPN 6,138,6181).

Regarding **claim 58**, Chen discloses an apparatus comprising a means for measuring the strength of a magnetic field (e.g. column 4, lines 25 - 30); means for determining the position of the external device relative the implant (e.g. column 4, lines 33 - 36); means for comparing a measured strength to a threshold value and means for indicating the external device is displaced when the measured strength exceeds a threshold value (e.g. column 6, lines 3 – 15); means for mapping that comprises a look-up table comprising a plurality of pairs of values of magnetic field strength to separation distance (e.g. column 6, lines 3 – 15). The phrase "when the measured strength of the magnetic field proximal to the external transceiver is greater than the threshold value" is functional language. The processor taught by Chen is capable comparing the measured strength against a threshold and indicating the external transceiver has been displaced when the measured strength of the magnetic field proximal to the external transceiver is greater than the threshold value.

In the alternative, processors that determine a difference between a desired value and a measured value are well known in the art. In such a case, the difference is compared against a threshold to determine if it is greater than a threshold value. It would have been an obvious matter of design choice to a person of ordinary skill in the art to modify the system as taught by Chen with a system that indicates the transceiver

has been displaced when the measured strength of the magnetic field is greater than the threshold value, because Applicant has not disclosed that requiring the measured strength to be greater than the threshold value provides an advantage, is used for a particular purpose, or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected Applicant's invention to perform equally well with requiring the measured strength to be less than the threshold value as taught by Chen, because it provides an indication of alignment and a distance that is required to optimize alignment and since it appears to be an arbitrary design consideration which fails to patentably distinguish over Chen.

Therefore, it would have been an obvious matter of design choice to modify Chen to obtain the invention as specified in the claims.

7. Claims 1 – 4, 11, 12, 16 - 19, 28, and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jeutter (U.S. Patent 5,314,453) in view of Kung (U.S. Patent 6,366,817).

Regarding **claims 1 – 4, 11, 12, 16 – 19, 28, and 29**, Jeutter discloses a method and apparatus comprising a means for measuring the strength of a magnetic field (e.g. column 6, lines 4 – 12); means for determining the position of the external device relative the implant and indicating through use of a visible indication that the device is displaced when the measured strength is greater than a threshold value (e.g. column 4, line 67 – column 5, line 10); but fails to teach that the magnetic field is generated at least in part by the external transceiver. Kung teaches it is known to use an externally

generated magnetic field in order to determine the position of an implantable device in relation to the external device as set forth in column 15, lines 50 – 56. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the generated magnetic field as taught by Jeutter with a magnetic field generated at least in part by an external device as taught by Kung, since such a modification would provide the predictable results of allowing a physician or a technician to easily access the magnetic field generator and thus more easily perform maintenance on the generator.

8. Claims 1 – 7, 11 – 22, and 28 – 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chen et al. (U.S. Patent 6,138,681) in view of Kung.

Regarding **claims 1 – 7, 11– 22, 28 – 32**, Chen discloses a method and apparatus comprising a means for measuring the strength of a magnetic field (e.g. column 4, lines 25 - 30); means for determining the position of the external device relative the implant (e.g. column 4, lines 33 - 36); means for indicating the external device is displaced when the measured strength is greater than a threshold value (e.g. column 6, lines 3 – 15); means for mapping that comprises a look-up table comprising a plurality of pairs of values of magnetic field strength to separation distance (e.g. column 6, lines 3 – 15); wherein the means for measuring comprises a pickup coil positioned in a plane substantially perpendicular to a primary axis of the magnetic field and comprising an open circuited single turn (e.g. column 4, liens 50 – 58); but fails to teach that the magnetic field is generated at least in part by the external transceiver. Kung

teaches it is known to use an externally generated magnetic field in order to determine the position of an implantable device in relation to the external device as set forth in column 15, lines 50 – 56. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the generated magnetic field as taught by Chen with a magnetic field generated at least in part by an external device as taught by Kung, since such a modification would provide the predictable results of allowing a physician or a technician to easily access the magnetic field generator and thus more easily perform maintenance on the generator.

9. Claims 8 - 10, 23 - 27, and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chen et al. in view of Kung as applied to claim 1 above, and further in view of Bornhoft et al. (U.S. Patent Application Publication 2003/0074035).

Regarding **claims 8 – 10, and 23 – 27**, Chen discloses the claimed invention except a bidirectional transcutaneous link. Bornhoft teaches that it is known to use transceivers having a bidirectional RF telemetric link for the transmitting of power and data signals as set forth in paragraphs 13, 14, and 29. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the transcutaneous link as taught by Chen with the bidirectional RF link as taught by Bornhoft, since such a modification would provide the predictable results of minimizing the amount of circuitry in both the implanted device and the external device while still allowing both data and power to be transferred from one device to another.

Regarding **claim 33**, Chen discloses the claimed invention except for peak

detector means. Bornhoft teaches that it is known to use peak detector means to determine the magnetic strength as set forth in paragraph 25. It would have been obvious to one having ordinary skill in the art at the time the invention as made to modify the pick-up coil as taught by Chen with the peak detecting means as taught by Bornhoft, since such a modification would provide the predictable results of efficiently determining the amplitude of the received signal, and thus determining the positioning of the external device relative the implanted device.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph M. Dietrich whose telephone number is (571)270-1895. The examiner can normally be reached on M-F, 8:00 - 5:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Angela Sykes can be reached on 571-272-4955. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/J. M. D./
Examiner, Art Unit 3762

/George R Evanisko/
Primary Examiner, Art Unit 3762